

Title (en)

METHODS AND REAGENTS FOR DETECTING AN ANTIBODY TO A SESAME NSLTP

Title (de)

VERFAHREN UND REAGENZIEN ZUM NACHWEIS EINES ANTIKÖRPERS GEGEN EIN SESAM-NSLTP

Title (fr)

PROCÉDÉS ET RÉACTIFS POUR LA DÉTECTION D'UN ANTICORPS CONTRE UNE NSLTP DE SÉSAME

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Abstract (en)

The present invention relates to a polypeptide comprising a sesame nsLTP characterized by SEQ ID NO11 or a variant thereof, wherein the polypeptide is isolated, purified and/or immobilized, a diagnostically useful carrier comprising a solid phase coated with the polypeptide, a pharmaceutical composition comprising the polypeptide, a method comprising the step detecting in a sample the presence or absence of an antibody binding specifically to a sesame nsLTP characterized by SEQ ID NO11, a use of a polypeptide comprising a sesame nsLTP characterized by SEQ ID NO11 or a variant thereof, the polypeptide, carrier or kit for detecting an antibody binding specifically to a sesame nsLTP characterized by SEQ ID NO11 or for manufacturing a device for detecting said antibody, an enriched, isolated or purified antibody, preferably IgG or IgE class antibody, or a recombinant antibody binding specifically to a sesame nsLTP characterized by SEQ ID NO11 and a method for isolating such an antibody.

IPC 8 full level

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Citation (applicant)

- US 2018231567 A1 20180816 - SUER WALTRAUD [DE], et al
- WO 2013041540 A1 20130328 - EUROIMMUN MEDIZINISCHE LABORDIAGNOSTIKA AG [DE]
- EP 3025780 A1 20160601 - EUROIMMUN MEDIZINISCHE LABORDIAGNOSTIKA AG [DE]
- EP 3025779 A1 20160601 - EUROIMMUN MEDIZINISCHE LABORDIAGNOSTIKA AG [DE]
- EHLERS, A.M. ROSSNAGEL, M.BRIX, B. ET AL.: "Sesame oleosins are minor allergens", CLIN, vol. 9, 2019, pages 32, Retrieved from the Internet <URL:<https://doi.org/10.1186/s13601-019-0271-x>>
- J. IMMUNOL. METHODS, vol. 125, no. 1-2, pages 57 - 65
- HAMILTON RG: "Application of engineered chimeric antibodies to the calibration of human antibody standards", ANN BIOL CLIN (PARIS, vol. 49, no. 4, 1991, pages 242 - 8, XP001037456
- ROSENBERG, I. M.: "Protein Analysis and Purification", 2005, ELSEVIER
- "Thermo Scientific Pierce Antibody Production and Purification Technical Handbook", 2020
- ALTMANN, F.: "Coping with cross-reactive carbohydrate determinants in allergy diagnosis", ALLERGO J INT, vol. 25, no. 4, 2016, pages 98 - 105
- KRUGER, N. J.: "The Protein Protocols Handbook", vol. 1996, SPRINGER, article "Detection of Polypeptides on Blots Using Secondary Antibodies", pages: 967
- ARTHUR LESK: "Introduction to bioinformatics", 2008, OXFORD UNIVERSITY PRESS
- LARKIN, M. A. BLACKSHIELDS, G. BROWN, N. P. CHENNA, R. MCGETTIGAN, P. A. MCWILLIAM, H. VALENTIN, F. WALLACE, I. M. WILM, A. LOPEZ, R.: "Clustal W and Clustal X version 2.0. Bioinformatics", vol. 23, 2007, pages: 2947 - 2948
- CHEN XZARO JLSHEN WC: "Fusion protein linkers: property, design and functionality", ADV DRUG DELIV REV, vol. 65, no. 10, 2013, pages 1357 - 1369, XP028737352, DOI: 10.1016/j.addr.2012.09.039
- LIN-CEREGHINO GPSTARK CMKIM D ET AL.: "The effect of a-mating factor secretion signal mutations on recombinant protein expression in Pichia pastoris", GENE, vol. 519, no. 2, 2013, pages 311 - 317
- FREUDL, R.: "Signal peptides for recombinant protein secretion in bacterial expression systems", MICROB CELL FACT, vol. 17, 2018, pages 52
- OWJI, H. ET AL.: "A Comprehensive Review of Signal Peptides: Structure, Roles, and Applications", EUROPEAN JOURNAL OF CELL BIOLOGY, 2018, pages 97
- COLOMBO ET AL.: "Identification of an Immunodominant IgE Epitope of the Parietaria judaica Major Allergen", THE JOURNAL OF IMMUNOLOGY, vol. 160, no. 6, 15 March 1998 (1998-03-15), pages 2780 - 2785
- SALCEDO G ET AL.: "Plant non-specific lipid transfer proteins as food and pollen allergens", CLIN EXP ALLERGY, vol. 34, no. 9, September 2004 (2004-09-01), pages 1336 - 41, XP055832970, DOI: 10.1111/j.1365-2222.2004.02018.x
- SAMBROOK, J. FRITSCH, E. F. MANIATIS, T.: "Molecular Cloning", 1989, CSH
- BROWN T. A.: "Gene Cloning - an introduction", 1986, CHAPMAN & HALL
- BURGESS, R. R. DEUTSCHER, M. P.: "Strategies for Protein Purification", 2009, GE HEALTHCARE LIFE SCIENCES
- MATRICARDI ET AL.: "EAACI Molecular Allergology User's Guide", PEDIATR ALLERGY IMMUNOL, vol. 27, May 2016 (2016-05-01), pages 1 - 250
- ASERO, EUR ANN ALLERGY CLIN IMMUNOL, vol. 46, no. 4, July 2014 (2014-07-01), pages 142 - 6
- PLOTKINORENSTEINOFFIT: "Vaccines", 2013, ELSEVIER SAUNDERS
- SCHIJNS, O'HAGAN: "Immunopotentiators in Modern Vaccines", 2006, ELSEVIER ACADEMIC PRESS

Citation (search report)

- [XYI] US 2005031631 A1 20050210 - GERACI DOMENICO [IT], et al
- [XAYI] WANGORSCH A ET AL: "Molecular cloning of plane pollen allergen Pla a 3 and its utility as diagnostic marker for peach associated plane pollen allergy", CLINICAL & EXPERIMENTAL ALLERGY, vol. 46, no. 5, 26 April 2016 (2016-04-26), pages 764 - 774, XP055833130, DOI: 10.1111/cea.12721
- [XYI] DÍAZ-PERALES A ET AL: "Recombinant Pru p 3 and natural Pru p 3, a major peach allergen, show equivalent immunologic reactivity: A new tool for the diagnosis of fruit allergy", JOURNAL OF ALLERGY AND CLINICAL IMMUNOLOGY, vol. 111, no. 3, 1 March 2003 (2003-03-01), pages 628 - 633, XP055833483, DOI: 10.1067/mai.2003.75

- [XI] CHOI A M ET AL: "Isolation and characterization of multiple abundant lipid transfer protein isoforms in developing sesame (*Sesamum indicum* L.) seeds", PLANT PHYSIOLOGY AND BIOCHEMISTRY, vol. 46, no. 2, 1 February 2008 (2008-02-01), pages 127 - 139, XP022479176, DOI: 10.1016/J.PLAPHY.2007.10.003
- [Y] PRADO M ET AL: "Advanced DNA- and Protein-based Methods for the Detection and Investigation of Food Allergens", CRITICAL REVIEWS IN FOOD SCIENCE AND NUTRITION, vol. 56, no. 15, 7 April 2015 (2015-04-07), pages 2511 - 2542, XP055711557, DOI: 10.1080/10408398.2013.873767
- [Y] NICOLIE B ET AL: "Allergie au maïs", REVUE FRANCAISE D'ALLERGOLOGIE, vol. 49, no. 7, 1 November 2009 (2009-11-01), pages 547 - 553, XP026741837, DOI: 10.1016/J.REVAL.2009.07.001
- [A] ADATIA A ET AL: "Sesame allergy: current perspectives", vol. 10, 1 April 2017 (2017-04-01), pages 141 - 151, XP055833382, Retrieved from the Internet <URL:<https://www.dovepress.com/getfile.php?fileID=36212>> DOI: 10.2147/JAA.S113612
- [Y] GARINO CRISTIANO ET AL: "In silico allergenicity prediction of several lipid transfer proteins", COMPUTATIONAL BIOLOGY AND CHEMISTRY, ELSEVIER, AMSTERDAM, NL, vol. 60, 28 November 2015 (2015-11-28), pages 32 - 42, XP029379971, ISSN: 1476-9271, DOI: 10.1016/J.COMPBIOLCHEM.2015.11.006
- [Y] BROSTEDT, P; SJÖLANDER, S; ERICSON, C; HOLTZ, A; CARLSSON, R; ITO, K: "Measurement of IgE to purified sesame seed proteins in sera from sesame allergic Japanese children", ALLERGY, WILEY-BLACKWELL PUBLISHING LTD, UNITED KINGDOM, vol. 66, no. Suppl. 94, 323, 10 June 2011 (2011-06-10), pages 145 - 145, XP071461466, DOI: 10.1111/J.1398-9995.2011.02605.X

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